KW250S

KW SERIES TUBE INPUT INTEGRATED AMPLIFIER/TUNER/CD PLAYER

INSTRUCTIONS FOR USE

Thank you for purchasing the Musical Fidelity KW250S

This model uses the very latest DAB/FM radio text receiver, top quality CD transport, ultra low jitter 24 Bit DAC technology and further jitter reduction techniques to achieve both an excellent technical specification and unparalleled DAB/FM/CD sound quality. This is complimented with a top quality 6922 tube line level preamplifier stage and two monobloc power amps capable of driving over 250W.

The KW250S is a perfect answer to most hi-fi requirements in a single, beautifully engineered package.

Used properly and carefully, it should give many years of outstanding musical reproduction.

Dust regularly with a soft duster or soft brush, but be careful when using cleaning or polishing agents - they may harm the surface finish.

If you have any questions about your audio system,
Please consult your dealer who is there to help and advise.

MUSICAL FIDELITY

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IMPORTANT! *(U.K. only)*

This unit is supplied in the U.K. with mains lead fitted with a moulded 13 amp plug. If, for any reason, you need to cut off the plug, please remove the fuse holder and dispose of the plug safely, out of reach of children. **It must not be plugged into a mains outlet.**

The wires in the mains lead supplied with this appliance are coloured in accordance with the following code:

Green and yellow.....Earth
Blue.....Neutral
Brown.....Live

WARNING - This appliance MUST be earthed

As the colours of the wires of the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured green-and-yellow must be connected to the terminal in the plug which is marked with the letter E or coloured green or green-and-yellow, or by the earth symbol : ⏚

The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.

If connecting to a BS1363 plug, a 13 amp fuse must be used.

WARNING:

ANY MODIFICATIONS TO THIS PRODUCT NOT EXPRESSLY APPROVED BY MUSICAL FIDELITY WHO IS THE PARTY RESPONSIBLE FOR STANDARDS COMPLIANCE COULD VOID THE USER'S AUTHORITY TO OPERATE THIS EQUIPMENT.

CLASS 1 LASER PRODUCT

The KW250S incorporates a CD player which has been designed and manufactured according to FDA regulations "title 21, CFR, chapter 1, sub-chapter J, based on the Radiation Control for Health and Safety Act of 1968", and is classified as a Class 1 laser product. There is no hazardous radiation during normal use because invisible radiation emitted inside this product is completely confined within the protective housing. However you must observe the following important warnings:

CAUTION!

THIS CD PLAYER USES INVISIBLE LASER LIGHT. WHEN THE PLAYER OPERATES, LASER LIGHT IS RADIATED INTERNALLY. DO NOT REMOVE THE PROTECTIVE HOUSINGS.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE CAUSING EYE INJURY.

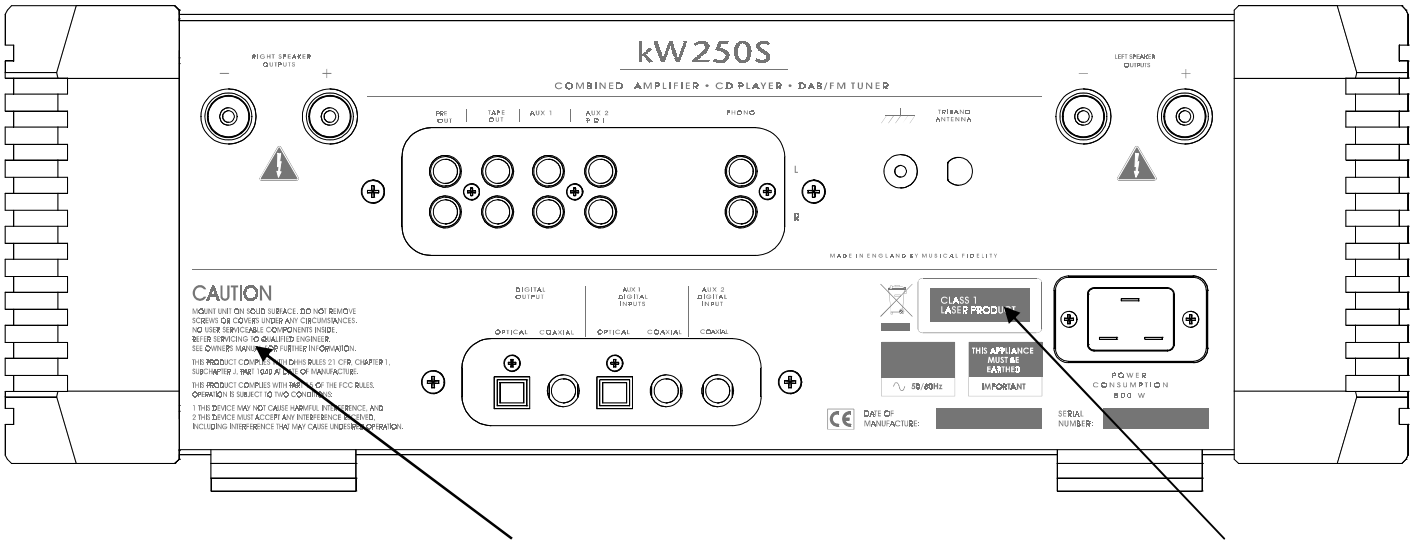
IF THIS PRODUCT DEVELOPS A FAULT, PLEASE CONTACT YOUR AUTHORISED MUSICAL FIDELITY SERVICE AGENT. DO NOT ATTEMPT TO SERVICE IT YOUR-SELF AND DO NOT CONTINUE TO USE THIS PRODUCT IN A FAULTY STATE.

INTERNAL LASER WARNING LABELS

CAUTION!
CLASS 1
LASER
PRODUCT

CAUTION	-	INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.
VORSICH!	-	UNSICHTBARE LASERSTRAHLUNG TRITT AUS, WENN DECKEL GEÖFFNET UND WENN SICHERHEITSVERRIEGELUNG ÜBERBRÖCT IST. NICHT DEM STRAHL AUSSETZEN!
VARNING	-	OSYNLIG LASERSTRALNING NÄR DENNA DEL AR ÖPPNAD OCH SPÄRR ÄR URKOPPLAD. STRALEN AL FARLIG.
ADVARSEL	-	USYNLIG LASERSTRAKING VED ABNING, NAR SIKKERHEDSAFBRYDEREER UDE AF FUNCTION UNDGA UDSÆTTELSE FOR STRALING.
VAROITUSI	-	SUOJAKOTELOA EI SAA AVATA LAITE SISÄLTÄÄ LASERDIODIN, JOKA LAHETTÄÄ (NAKYMATONTA) SILMILLE VAARALLISTA LASERSATEILYA.

REAR PANEL :



THIS PRODUCT COMPLIES WITH DHHS RULES 21 CFR, CHAPTER 1, SUBCHAPTER J, PART 1040 AT DATE OF MANUFACTURE.
THIS PRODUCT COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO TWO CONDITIONS:
1. THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND
2. THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.

CLASS 1
LASER PRODUCT

LASER INFORMATION:	
Optical pick-up :	Manufacturer : Sharp Pick-up type : GH6C005B Wavelength : 780nm

RADIO - FREQUENCY INTERFERENCE (RFI)

This equipment uses and can radiate radio frequency energy, and if not installed and operated in accordance with the instructions, may cause interference to radio communications.

However, it is designed to radiate minimal levels of RFI, and accordingly been testing to North American standards (FCC regulations - limits for a class B digital device pursuant to part 15 of the rules). These requirements are intended to provide reasonable protection against excessive interference in a residential installation.

Conversely, the product has also been checked to ensure that its own operation is not adversely affected by normal background levels of RFI received externally.

However, if interference is experienced, for instance to radio or TV broadcasts, the user is recommended to try one or more of the following measures:

- Identify the source of interference by turning off power to the CD player or other equipment individually, and checking whether the problem disappears.
- Re-orientate or relocate the receiving aerial.
- Move the CD player away from the receiver.
- Connect the CD player to a mains outlet on a different circuit from the receiver.
- Consult a dealer or experienced TV/radio technician for help.

If a problem persists, please contact Musical Fidelity's service department.

INSTALLATION PRECAUTIONS and USER INFORMATION

Your new KW250S is designed and built to provide trouble-free performance, but as with all electronic devices it is necessary to observe a few precautions:

Heed all warnings shown on the back of the product.

Only connect the KW250S to a mains outlet having the same voltage as marked at the back of the unit.

Always ensure that when disconnecting and reconnecting your audio equipment the mains supply is switched off.

Position the mains lead and signal interconnects where they are not likely to be walked on or trapped by items placed on them.

Do not use near water, or place water-filled containers on the KW250S, for example, a flower vase or potted plants. **If water does spill inside, immediately pull out the mains plug from the wall socket and inform your dealer, who should then check the unit before further use. Entry of liquid into the KW250S is dangerous, and may cause electric shock or fire hazard.**

Do not place the unit near direct heat sources such as radiators, direct sunlight or other equipment.

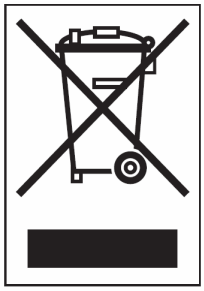
Do not remove any covers or try to gain access to the inside. There are no internal adjustments or fuses you can replace yourself. Refer all service work to an authorised Musical Fidelity agent.

Note: Unauthorised opening of the equipment will invalidate any warranty claim.

Dust regularly with a soft cloth or soft brush but be careful when using cleaning or polishing agents - they may harm the surface finish.

The electronics in modern hi-fi equipment is complex and may, therefore, be adversely affected or damaged by lightning. For protection of your audio system during electrical storms, remove the mains plugs and disconnect any aerial lead.

If after-sales service is required, to help your dealer identify the KW250S please quote the serial number located on the rear panel of the unit.



DISPOSAL

The crossed out wheeled bin label that appears on the back panel of the product indicates that the product must not be disposed of as normal household waste. To prevent possible harm to the environment please separate the product from other waste to ensure that it can be recycled in an environmentally safe manner. Please contact your local government office or your retailer for available collection facilities.

DISPOSITION

La poubelle sur roulettes barrées X, qui apparaît en logo sur le panneau arrière du produit, indique que celui-ci ne doit pas être traité comme un déchet domestique commun. Afin de protéger l'environnement, ce produit électronique devra être géré séparément et donc recyclé selon les nouvelles normes Européennes Rohs concernant les déchets d'appareils électroniques. Prière de contacter les services concernés gouvernementaux ou votre point de vente pour l'élimination et l'enlèvement de déchets électroniques équipés de composants électroniques.

DISPOSAL

La etiqueta cruzada hacia fuera del compartimiento que aparece en el panel trasero del producto indica que el producto no se debe reciclarse como basura normal de la casa. Para prevenir daños posible al ambiente separe por favor el producto de otras basura para asegurarse de que puede ser reciclada de una manera ambientalmente segura. Entre en contacto por favor a su oficina gubernamental local o a su minorista para las instalaciones disponibles de la colección.

RIFIUTI

L'etichetta del cassonetto barrato riportato sul retro dell'apparecchio indica che il prodotto non deve essere smaltito tramite la procedura normale di smaltimento dei rifiuti domestici. Per evitare eventuali danni all'ambiente, separare questo prodotto da altri rifiuti domestici in modo che possa venire riciclato in base alle procedure di rispetto ambientale. Per maggiori dettagli sulle aree di raccolta disponibili, contattate l'ufficio govenativo locale od il rivenditore del prodotto.

FACHGERECHTE ENTSORGUNG:

Das auf der Geräterückseite angebrachte Label deutet darauf hin, dass das Produkt nicht mit konventionellem Hauskehricht entsorgt werden darf. Um Schäden und Verschmutzungen an Umwelt und Mensch zu vermeiden, muss das Produkt fachgerecht entsorgt und von anderem Abfall getrennt werden. Wenden Sie sich bei Fragen hierzu an Ihren Fachhändler oder an eine öffentliche Informationsstelle.

AFVAL

Het label op de achterzijde van dit apparaat, een afvalbak op wielen met een kruis doorgehaald, geeft aan dat dit apparaat niet samen met gewoon huishoudafval mag worden weggegooid. Om mogelijke schade aan onze leefomgeving te voorkomen dient dit apparaat, gescheiden van gewoon huishoudelijk afval, te worden afgevoerd zodat het op een milieuvriendelijke manier kan worden gerecycled. Neem voor beschikbare inzamelplaatsen contact op met uw gemeentelijke reinigingsdienst of met uw elektronica leverancier.

HÄVITTÄMINEN

Yliruksattua jäteastiaa kuvaava tarra tuotteen takalevyssä kertoo, että tuotetta ei saa käsitellä normaalina talousjätteenä. Ympäristön suojelemiseksi on tuote pidettävä erillään muusta jätteestä ja se on kierrätettävä ekologisesti kestävällä tavalla. Ota yhteyttä laitteen myyjään tai Pirkanmaan Ympäristökeskukseen lähimmän kierrätyskeskuksen löytämiseksi.

INTRODUCTION

Congratulations on the purchase of your new KW250S integrated CD/DAB/FM/PRE and dual mono power amp.

The KW250S is one of the most comprehensive fully integrated Hi-Fi designs ever made, and, encloses the best elements out of all our separates into one convenient box.

The CD player has extremely low jitter, vanishingly low distortion, exemplary linearity and ultra low noise. The tuner is designed to bring DAB into the realms of hi-fidelity sound reproduction to complement the very latest technology DAB/FM receiver circuit. Great attention has been paid to internal layout, isolating each circuit section to prevent possible interaction.

The CD, DAB and FM digital data streams are first up-sampled to 192kHz, which moves noise, jitter and distortion artefacts well above the audio band. They are then passed through a new, low noise, low distortion 24-bit dual-differential digital-to-analogue converter, which allows simpler filtering of the analogue output. This in turn gives an improved audio response without the need for sharp filters that degrade sound quality. The result is a CD player and DAB/FM tuner which has a smoother response than previously possible with none of the "hardness" of other units.

The preamplifier sections are our finely tuned and tweaked tube input line level preamplifier for smooth tube sound coupled with low noise and virtually no distortion. This also includes our top quality low noise phono stage which caters for both MM and MC cartridge users.

The power amplifier consists of two mono block amplifier modules with completely separate supplies for the absolute best in separation and imaging. Rated for 250W nominal they are enough to drive even the most demanding loudspeakers with ease. Low distortion and very quiet they will deliver all music types exactly as the artist originally intended!

The resultant performance achieved by this unit is among the best in the world. It has excellent signal to noise ratio, low distortion, wide bandwidth, huge dynamic range, extraordinary resolution and fine detail.

INSTALLATION

Position the KW250S on a stable, horizontal surface where there is no risk of it being knocked, or subjected to vibration such as from loudspeakers.

Protect your KW250S from humidity - if the unit is moved from a cold place to a warm room, or in generally humid conditions, moisture can form on the pickup lens inside the player, preventing the laser beam from reading the disc. If this happens, remove the CD, close the disc drawer, and leave the unit switched on for an hour or so to allow sufficient time for the moisture to evaporate.

AERIAL (ANTENNA)

For ease of installation, a tri-band aerial is supplied with the unit. This covers the FM, DAB II, III and L-bands and picks up sufficient signal for most domestic purposes. However, if FM stereo background noise is obtrusive, radio text is corrupted or DAB cut-out is experienced, or unit is to be used in a fringe area, a rooftop DAB and FM aerial may be required. Please contact an approved aerial contractor with good local knowledge.

The tri-band aerial is plugged into the tri-band antenna F connector at the rear of the unit, and should be securely fastened by tightening the nut.

AUDIO CONNECTIONS

Outputs: Connect your loudspeakers to the terminals on the back panel marked as **LEFT** and **RIGHT SPEAKER** outputs.

Preamp outputs phono sockets are controlled by the volume and source controls. This allows connection of a second amplifier for bi-amping or increased drive.

Tape outputs of nominal line level and are constant volume for recording to tape, CD-R/RW, or any other recordable format.

If desired, the unit can also be attached to an external DAC of your choice. The unit outputs COAX and OPTICAL digital signal stream at 48kHz.

NOTE: The digital output works for CD, DAB ***and*** FM.

Inputs: The KW250S has three line level inputs and a Phono MM/MC input. PHONO MM/MC, AUX1 and AUX2 are available at the back for other signal sources.

A Portable Device Input (PDI) 3.5mm stereo jack is provided at the front which is shared with the AUX1 rear inputs. This allows easy connection of a portable player.

Two digital inputs AUX 1 (optical and coax.), AUX 2 (coax only), cater for digital sources that would benefit from the KW250S's up to date DAC circuits. Use these inputs for better quality from mini disc, DAT or MP3, for enhanced sound quality.

NOTES ON USING COMPACT DISCS

Always hold discs by the edges and make sure they remain clean - do not touch the surface. Keep discs away from direct sunlight and heat sources, such as radiators. Clean discs with a cloth before playing them, but do not use solvents such as benzene, thinners, or antistatic spray intended for analogue records.

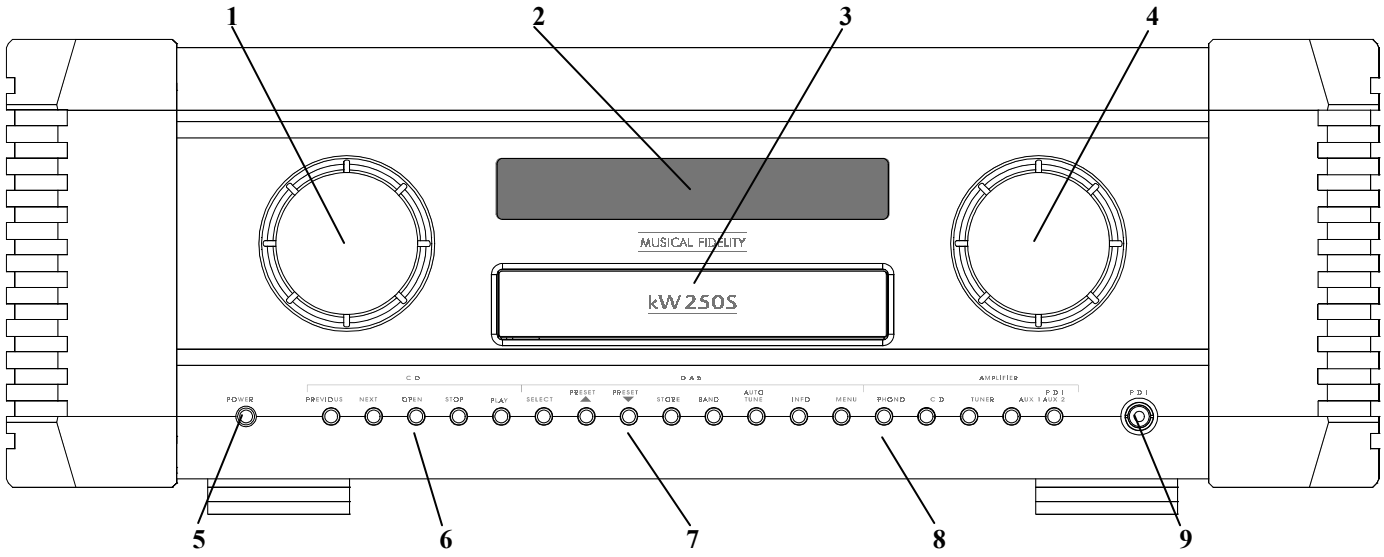
After playing, always return the disc to its case for storage.

CLEANING

Before cleaning the unit, switch off power at the mains switch and remove the mains plug from the wall socket.

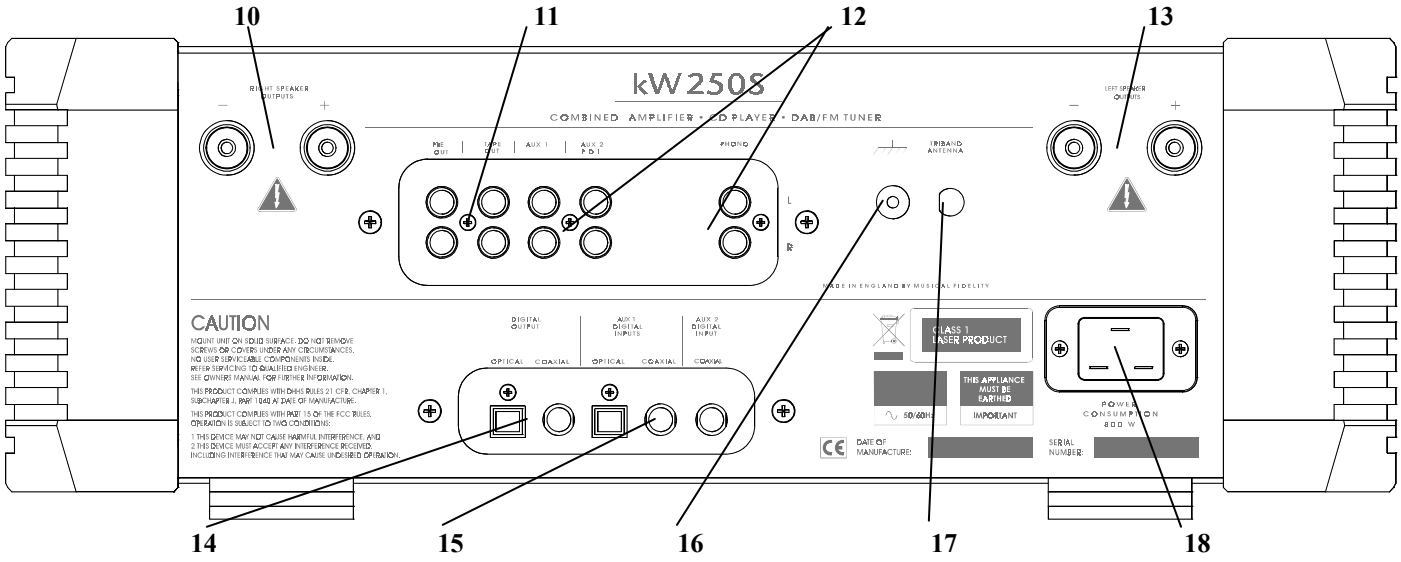
Clean the cabinet and remote control unit using a moist cloth. We do not advise using solvents, white spirit or thinners as they could damage the surface finish.

FRONT PANEL



1. **DAB/FM** Tuning knob
2. **DISPLAY** (incorporates remote control IR receiver)
3. **CD** drawer
4. **VOLUME** knob
5. **POWER** mains on/off switch
6. **CD** function buttons
7. **TUNER** function buttons
8. **AMPLIFIER** function buttons
9. **PDI** (Portable Device Input), 3.5mm jack connector

REAR PANEL



10. **LOUDSPEAKER OUPUTS** Right hand side
11. **PRE & TAPE OUTPUTS**
12. **PHONO, AUX 1, AUX 2/PDI INPUTS**
13. **LOUDSPEAKER OUPUTS** Left hand side
14. **DIGITAL OUTPUTS** RCA coaxial and optical
15. **AUX 1, AUX 2 DIGITAL INPUTS** RCA coaxial and optical
16. **PHONO GROUNDING** 4mm post
17. **DAB/FM AERIAL SOCKET** F-type
18. **IEC MAINS INLET**

The remote control shown below enables functions to be operated from a convenient distance.
Equivalent buttons on the remote control have the same functions as those on the front panel of the unit. Other functions are only available by remote control.
As the handset uses an invisible infra-red light beam, the front edge must be pointed directly towards the receiver window at the front of the player, without visual obstruction between them.
If the range of the remote control greatly decreases, replace the batteries with new ones. Do not mix old and new batteries - two are required, size AAA, LR03 or SUM-4.

Please dispose of used batteries in accordance to local regulations.

Tuner Buttons:

INFO – To access broadcast information

MENU – to choose options

AUTO TUNE – finds previous/next broadcast

MONO/STEREO – Option for weaker FM stations

Amplifier Buttons:

PHONO – Selects Phono input

CD – Selects internal CD

TUNER – Selects internal tuner

AUX 1 – Select source AUX 1

AUX 2 – Select source AUX 2/PDI

CD Buttons:

TIME – Displays Track Time/Time remaining

0-9 Buttons – Used to select track numbers

CHECK – Check pre programmed tracks

PROGRAM – Programs selection and order of tracks

INTRO – Player plays first 10 seconds of each track

REPEAT – Repeats whole disk or selected tracks

SEARCH – Fast forward/backward through track

STOP – Stop playing/Eject CD

BAND – Selects DAB or FM

STORE – Stores station as preset

SELECT – To choose preset/DAB station

PRESET ↑ ↓ selects preset

TUNE ↑ ↓ steps up/down band

MUTE – Mutes unit until pressed again

VOLUME UP/DOWN – sets volume level

DISPLAY – Dims display

CLEAR – Clears selected pre programmed track

A/B Sets repeat start/end to repeat section of track

SHUFFLE – Plays back tracks in random order

TRACK – Next/previous track

PAUSE/PLAY – Stop/start CD playback

LOADING AND PLAYING COMPACT DISCS

Select CD function by pressing CD button under AMPLIFIER heading to the right of the front panel, the CD button on the remote does the same.

To load a disc, press the **OPEN/CLOSE** button to open the transport drawer.
When the drawer is fully extended, insert the disc with the label facing upwards and then press either the **OPEN/CLOSE** or **PLAY/PAUSE** button to close the transport drawer again.
If **OPEN/CLOSE** has been pressed, the disc drawer closes and the unit scans the contents of the disc. After a short delay, the display window then shows the total number of tracks available on the CD, and total playing time. In the following example there are 7 tracks, lasting a total of 41 minutes 56 seconds :

If mains power to the unit is switched on with a disc already loaded, it will automatically search for the disc.
The display then indicates **STOP**, and shows the number of tracks available on the CD and total playing time, as in the above example.

DISC PLAY

If **PLAY/PAUSE** is pressed, the unit will begin playing from track 1, confirmed by the word **PLAY** appearing on the left of the display, with **1** in the centre and elapsed time on the right.

When all tracks on the CD have been played, the display shows **STOP** and total number of tracks on the disc.

PAUSE

Pressing the **PLAY/PAUSE** button on the front panel whilst a disc is playing pauses playback of the disc. **PAUSE** appears in the display window instead of **PLAY**. The disc will continue spinning, but the track does not advance and the CD's output is muted.

Pressing **PLAY/PAUSE** again resumes playback from the same place.

PAUSE (Remote control)

On the remote control, **PLAY** and **PAUSE** buttons have separate functions at each end of the same button. Pressing **PLAY** will only control disc play, and pressing **PAUSE** will not resume play. Note that if the disc is already playing, pressing the **PLAY** button reverts play to the beginning of the current track.

STOP

Playback can be stopped at any time by pressing the **STOP** button once. On the remote control, press either end of the button, not the middle part.

Pressing the **STOP** button a second time on front panel or remote opens the transport drawer.
If a disc is loaded but not playing, pressing **STOP** once will also eject the drawer.

TRACK SELECTION

To change track, the track skip buttons **PREVIOUS** and **NEXT** on the front panel can be pressed to jump forwards or backwards one track in either direction. Corresponding **TRACK** buttons on the remote control are marked |<< and >>| .
If the unit has stopped playing, a specific track can be accessed directly by pressing either **PREVIOUS** or **NEXT** to obtain the required track number, then pressing **PLAY/PAUSE**.

TRACK SELECTION (Remote control)

Simply press the **PLAY** button to start a CD playing from the first track.
Alternatively, a specific track can be selected directly by pressing one of the ten track number buttons grouped in the centre-section of the remote control. The chosen track then plays after a short delay of about 5 seconds. To play a track number with two digits, press the second digit button on the remote control within this delay period, example for track 17:
Press 1:

Press 7 within about 5 seconds:

After a small pause, machine plays selected track:

If a track number is chosen which is not available on the disc, for example pressing button number 9 if the CD has only 7 tracks, an INVALID TRACK message is briefly displayed (along with elapsed time of last track played).

REPEAT PLAYBACK

The **REPEAT** button on the remote control allows the repeated playback of either one track or all tracks on the disc. By pressing the **REPEAT** button once, only the current track is repeated, and the display shows

If the **REPEAT** button is pressed a second time, "**repeat disc**" is displayed instead, and the entire disc is then played repeatedly.

Pressing **REPEAT** a third time cancels repeat mode.

A-B REPEAT PLAYBACK

"A-B repeat" provides the option of playing just a certain section of the disc over and over again.
Find the beginning of the required section either by listening, or using the display time as a guide.
When the desired starting point is reached, press button **A / B** on the remote control.
The display will show

When the disc has reached the end of the required section, press the **A / B** button again, to display

and the unit continuously plays the selected part of the disc in this case, the segment of track 1 from 34 seconds to 1 minute 55 seconds.
To cancel A-B repeat mode, press **A / B** on the remote control.

SHUFFLE PLAYBACK

The SHUFFLE feature allows tracks on the discs to be played in random sequence rather than the normal consecutive order.

Tracks are also played in a different order each time the disc is restarted, or another disc loaded.
This function is obtained by pressing **SHUFFLE** on the remote control with the unit either stopped or playing. If the KW250S is already playing, play will continue in random order until all tracks on the disc have been played.
Shuffle play is cancelled by pressing the **SHUFFLE** button a second time. The unit resumes normal play function, continuing to the end of the disc in normal order starting from wherever it was left by the previous random selection.

From stop mode, pressing **PLAY/PAUSE** also begins shuffle play.
If **REPEAT** is then pressed whilst in shuffle mode, a repeat shuffle function is obtained

Pressing >>| selects the next track in random order.

SCAN INTRODUCTION

The scan-introduction function allows play back of just the start of each track on the disc, for instance to locate a preferred track by ear.
Press **INTRO** on the remote control, and if the player has stopped, the display will show

The first ten seconds (approximately) of each track on the CD can then be played in sequence by pressing either **PLAY/PAUSE** on the front panel, or **PLAY** on the remote control.
Press **INTRO** again to cancel introduction search mode. If **INTRO** mode is cancelled while the KW250S is still playing, the remainder of the entire disc will be played.

PROGRAMMED PLAY

The built-in program memory allows you to store up to 25 track numbers and then play them back in the held order. Each track is stored as a "step" in the program.
With the CD loaded and the player stopped, first press **PROGRAM** on the remote control. The following is then displayed :

On the remote control, press the numeric button of the track number corresponding to the first track you wish to store (number 3 for example).
That track number will now appear in the display:

Press **PROGRAM** again on the remote control - the next program step is selected, **(prog 2)** and the track number reverts to 0 ready for a new entry.

Continue entering track numbers in the same way up to a maximum of 25. If more than 25 tracks are attempted the memory will not accept any extra ones, and the display reverts to "**prog 1**".

Remember that when entering a single-digit track number, there is a delay of about two seconds before the display accepts the entry - this is to allow time for a second button to be pressed when a double-digit number is required.

If an incorrect entry is made, say track 99 when there are only 7 tracks available on the disc, a brief error message is displayed

If at any time you wish to add a track to the list, press the **CLEAR** button to obtain the next step number. Alternatively, to delete a previous entry, press **CLEAR** a second time to remove the last entry. Repeated pressing of **CLEAR** will then erase each step in reverse order. So to delete an entire program sequence from the memory, press **CLEAR** repeatedly until "**prog 1**" is shown in the display.

When the last track number has been entered, press **PROGRAM** a final time, then the **PLAY** button to start the program sequence.

If you wish to check the selection before playing back your program, the **CHECK** button can be pressed to step through each program entry in turn.

If during this check sequence the **PLAY** button is pressed, the remaining part of your programmed selection will play to the end of the sequence.

Otherwise, to play all the programmed tracks from the beginning of the sequence, press **PLAY/PAUSE**, or **PLAY** on the remote control.

The >>| button may be pressed to jump to the next track in the programmed sequence, or

|<< button to obtain the previous track in the sequence.

When all programmed tracks have been played, the CD player stops. The same track selection can then be played again by pressing the **PLAY/PAUSE** button on the front panel, or **PLAY** on the remote control.

To repeat a programmed sequence continually, press **REPEAT** whilst playing the program.

To cancel this mode, press **PROGRAM**.

Note: The program contents will be cleared if you switch off the power, or open the disc drawer and load another disc. If, however, the same disc is loaded again with the power still switched on, the program sequence is retained in the memory.

DISPLAY

KW250S display brightness can be controlled in three levels by pressing the **DISPLAY** button on the remote control.

The original setting is maximum brightness, but by pressing the **DISPLAY** button once, brightness is reduced, and a further press turns the display off. This controls display in CD, TUNER, and external source modes.

Basic problem-solving with a CD player is similar to troubleshooting other electrical or electronic equipment. Always check the most obvious possible causes first, such as the following examples:

Problem	Probable Cause	Remedy
No power when **POWER** button is pressed	Power plug is not inserted	Plug in securely fully into rear socket
No playback when disc is loaded, "NO DISC" displayed	Disc is loaded with label side down Incorrect disc type Dirty disc Moisture/humidity or cold affecting laser lens	Re-load with label side up Please load a standard audio CD Clean disk and try again Leave unit on for an hour to allow moisture to evaporate.
No audio output, or too low level output	Output muted Volume set too low	Check mute is not on Turn volume up
Sound is severely distorted, and volume control needs to be turned down very low	Line level audio lead is connected to phono input sockets of the amplifier	Re-connect lead to auxiliary sockets or other "line level" amplifier input
Mis-tracking (sound jumping)	Player is receiving vibration or shock Disc is dirty Moisture/humidity or cold affecting laser lens	Change position of player away from loudspeakers Clean disc surface Leave unit on for an hour to allow moisture to evaporate.
Hum	Audio connector plug is not fully pushed in	Insert plug securely
Interference noise heard from radio tuner	Player is positioned too near the tuner	Keep a reasonable distance between player and tuner, or switch off player power
Remote control does not work	Player's **POWER** switch is set to off	Set switch to on
	Battery(ies) fitted the wrong way round	Insert batteries correctly
	Batteries are flat	Change batteries for a new set
	Remote control is not pointed directly towards the front panel of the player	Ensure there is no obstruction between the remote control and player front
Remote control range has greatly reduced	Batteries are running out	Change batteries – for a new set

This product contains a PHILIPS CD mechanism, which complies with the PHILIPS/SONY red book CDDA standard. It is guaranteed to play all disks <u>similarly marked</u> without any problems.

Please note that due to "piracy" concerns, some record companies/pressing plants are creating disks that do not adhere to this standard. Such disks may –or- may not play in some –or- all CD player products of *<u>any</u>*** manufacturer. We advise caution in using these disks, as the information contained therein has been deliberately manipulated often causing audio degradation and/or playability problems.**

We also advise caution with using cheap CD-R, and/or CD-RW disks for audio, and to ensure all home-generated CDs intended for playback on this unit are recorded as CDDA AUDIO CDs (i.e. *<u>not</u>*** MP3, WAV, etc.) on good quality media.**

Remember - the most vulnerable part of a CD playing system is the disc itself. The most likely cause of a disc not playing is that the disc itself is faulty, scratched or simply dirty. Never open the case of the unit yourself, as this will invalidate the guarantee. If none of the above actions affect a cure, please contact your dealer or Musical Fidelity service agent.

DAB TUNER BUTTONS

Press **TUNER** under AMPLIFIER heading to select the internal DAB/FM tuner.
Note: Whenever the power is turned ON, the station you were previously receiving will be selected automatically. The name of the station appears in the display.

All settings, and stored stations, will be retained in memory while the unit is turned off. On selection, the last band (DAB/FM) and station is remembered.

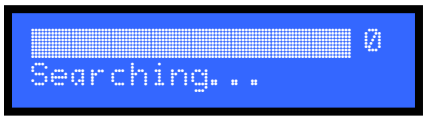
BAND

This button alternates the tuner between receiving DAB and FM stations

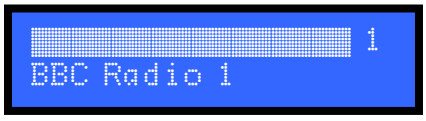
AUTO-TUNE

To update your tuner with locally available DAB stations Press the **AUTO TUNE** button.

The tuner will search through all the ensembles and pick out all the locally available stations.



When a station is found, the name is briefly displayed and the station tally at the top right increments. Note: if there are stations already stored, the tally does not start from 0, but from the number of stations previously



stored. In this manner, the station list is updated.
Once all the locally available bands have been scanned, the unit reverts to the first station found by name (in alphabetical order), or the previous broadcast being listened to, if applicable.

TUNE UP/DOWN

To select a station, simply turn the left-hand knob to cycle through the list of receivable broadcasts in your area. When the required station is displayed, push the knob or press the **SELECT** button to listen
See the section on the **PRESET** buttons to store favourite stations for easy recall

PRESET UP and PRESET DOWN

PRESET UP/DOWN buttons are used to select one of ten DAB preset memory locations. Press select when the desired preset is displayed.

STORE

It is possible to store favourite stations in preset memory locations using the **STORE** button as follows:
Tune to the station required:

Press **PRESET UP/DOWN** buttons until the desired preset. is displayed.

Press and hold the **STORE** to accept this preset. The display will indicate the preset is saved,

then reverts to the selected station
Note: this will overwrite any station stored previously on this preset.
Briefly pressing the button will display current preset without storing.
There are 10 presets available for programmes on the DAB band (in addition to the 10 provided for FM).
Presets are remembered even if the unit is switched off.

MONO/STEREO(remote only)

This button has no function when in DAB mode

INFO

Displays the current broadcast information in the following order:
- DAB programme text
- Music Type
- Network name
- Date and time (as transmitted by network)
- Transmission mode and bit rate
- Ensemble and frequency
- Signal Strength
- Returns to top of this list

MENU (DAB options)

Press **MENU** to access menu options whilst in DAB mode.

Use the **TUNE** up/down buttons to cycle through the options, and the **SELECT** button to choose displayed option.

Menu options available for DAB are:

Manual Tune: Allows manual search of ensembles and DAB frequencies

Canadian L band: Enables Canadian L-Band

European L Band: Enables European L band

Service Base: Factory use only

Customer Version: Software version reference

System reset: RESETS all presets and performs a new scan of DAB band

AUTO-TUNE

To auto search stations, press the **AUTO TUNE** button. The tuner will search upwards through the FM band and pick out the next station for you.

If pressed and held for more than a second, the tuner will scan back down the band to the previous station (the scan-down function is not available on the remote).

BAND

This button alternates the tuner between receiving FM and DAB stations

TUNE UP/DOWN

To manually tune to a station, simply turn the left-hand knob to cycle through the FM band. Turning slowly gives fine-tuning steps (50kHz).
When the required station frequency is displayed, the station should be heard, and after a few seconds radio text information is displayed, if available.

See the section on the **PRESET** buttons to store favourite stations for easy recall

PRESET UP and PRESET DOWN

PRESET UP/DOWN buttons are used to select one of ten FM preset memory locations. Press select when the desired preset is displayed.

STORE

It is possible to store favourite stations in preset memory locations using the **STORE** button as follows:
Tune to the station required:

Press **PRESET UP/DOWN** buttons until the desired preset is displayed.

Press and hold **STORE** to accept this preset. The display will indicate the preset has saved

and then revert to selected station.

Note: this will overwrite any station stored previously on this preset.
Briefly pressing the button will display current preset without storing. There are 10 presets available for programmes on the FM band (in addition to the 10 provided for DAB). Presets are remembered even if the unit is switched off.

MONO/STEREO (remote only)

This button enforces mono reception when inadequate aerial signal strength results in noisy stereo reception. MONO 'forces' mono at all times until the button is pressed again for AUTO. In **AUTO** mode, the tuner automatically switches according to signal strength.

INFO

Displays the current broadcast information in the following order:
PI: Programme identification*
PTY: Programme type*
RT: Radio text*
CT: Clock date and time (as transmitted by network)*
MS: Music/Speech (info only)*
DI: Decoder information*
Signal Strength with bar graph
Audio mode
AF: Alternate frequency*
- Returns to top of this list
* Relies on FM RDS. Not displayed if no or insufficient RDS signal.

MENU (FM options)

Press **MENU** to access menu options whilst in FM mode.
Use the **TUNE** up/down knob to cycle through the options, and the **SELECT** button to choose displayed option.
Menu options available for FM are:
System reset: RESETS all presets and tuning to 87.50MHz (beginning of FM Band)
Customer Version: Current software version

TUNER PROBLEMS?

Basic problem-solving with a tuner is similar to troubleshooting other electrical or electronic equipment. Always check the most obvious possible causes first, such as the following examples:

Problem	Probable Cause	Remedy
No power when **POWER** button is pressed	Mains power plug is not inserted fully into rear socket	Plug in securely.
No audio output	Mute function is still selected on the pre-amp or amplifier Tape monitor function on the pre-amp or amplifier has been selected accidentally Speakers not connected, or incorrectly wired	Cancel mute function on the pre-amp or amplifier. Cancel tape monitor function on the pre-amp or amplifier. Check speaker cables
Excessive background noise (hiss or crackle on FM) Audio cuts out on DAB	Position of aerial incorrect. Aerial signal strength insufficient.	Reposition aerial. Consider a rooftop DAB/FM aerial see P.6 **Aerial (Antenna)**
Tuner does not display FM RDS station name and/or text	Tuned station does not transmit the RDS feature	RDS information feature therefore unavailable.
	Signal insufficient to receive RDS	Try repositioning the whip aerial if used. Improve the aerial.
Remote control does not work	Tuner's **POWER** switch is set to off One or more batteries fitted the wrong way round Batteries are flat Remote control is not pointed directly towards the front panel of the tuner	Set switch to on Insert batteries correctly Change batteries – do not mix old and new ones Ensure there is no obstruction between the remote control and player tuner
Remote control range has greatly reduced	Batteries are running out	Change batteries for a new set

If none of these actions affect a cure, please contact your dealer, or an authorised Musical Fidelity service agent. Remember; never open the case of the KW250S yourself, as this will invalidate the guarantee.

All input, output and power connections should be made with the mains power switched OFF.

INPUT CONNECTIONS

Phono: The KW250S has a pair of RCA type phono input sockets intended for use with moving magnet (MM) or moving coil (MC) pickups. Some turntable/pickup arm combinations are fitted with an extra wire for chassis earth. This should be connected to the earth terminal on the back panel.

Line level inputs: The unit also has two stereo pairs of RCA "line level" input sockets controlled by the internal volume setting.
They both have the same input sensitivity, and are therefore suitable for use with any source component having a line output of 300mV nominal. The two sockets on the rear panel are marked, **AUX1, AUX2/PDI**, corresponding with function selector buttons on the front panel. The **AUX2/PDI** input sockets on the back share the same input as the PDI input jack at the front.
Do not connect devices to both sides of the AUX2 input simultaneously. Please see note P.20
Digital inputs: Digital sources are catered for on the AUX1, AUX 2 inputs. Unit automatically switches AUX1 input to digital source type (coax/optical) on insertion of a lead *with digital signal present.*

OUTPUT CONNECTIONS

Speakers: Connect your loudspeakers to the terminals on the back panel marked as **LEFT** and **RIGHT SPEAKER** outputs. Make sure both speakers are connected with the same polarity.

PRE-: The KW250S has its pre-amplifier output available from RCA sockets on the back panel marked **PRE-OUT**, and is controlled by the volume adjustment.
This is to allow "bi-amplification" using suitable external amplifiers and crossover networks to power the speaker drive components separately, giving noticeable improvement in clarity, imaging and bass weight. In this arrangement, typically the KW250S speaker outputs may be used to drive the speaker's "tweeter" (high audio frequencies), and an external higher power stereo amplifier(s) could drive the "woofer" (low frequencies).

The KW250S's **PRE OUT** RCA sockets would therefore be connected to the input of the external "woofer" amplifier in this example.
If you are in doubt about bi-amplification, please contact your dealer for advice.

TAPE OUT: The KW250S has a single tape output with facilities for recording material to a suitable line-level recorder such as tape, CD-R/RW, minidisk etc. The tape deck's line inputs are connected to the units' **TAPE OUT** sockets to record the material being listened to. The line outs should be connected to the unused of the **AUX** inputs

STARTING . . . .
Once all connections are made, switch on the unit, using the POWER button to the bottom left of the front panel, the front panel of the KW250S- the blue display will

light indicating that the unit is on. The feet glow red to indicate speaker outputs are muted, for about fifteen seconds, so no sound will be heard from your speakers. Once the 15 seconds is up, the feet glow orange to indicate unit is usable, but still warming up. At this stage sound output is now available. After 30 minutes, the feet glow blue to indicate unit is fully warmed up.

VOLUME
The volume control knob, to the right of the front panel, should be adjusted for normal listening levels.

Whilst being adjusted, the volume setting is shown in the display window. The settings range from 0 to 100 in 1dB resolution steps giving about +19db out from the preamp outputs at 100 setting.
Note: to prevent damage to hearing and speakers, the switch-on volume setting is limited to 50 maximum. Please readjust setting after switch on if necessary

PHONO INPUT
To use the phono input, connect your turntable cartridge outputs to the phono input sockets (see p.8). Pressing the phono button selects the corresponding input.

Pressing a second time alternates the input for moving magnet (MM) or moving coil (MC)

Choose the input that best describes the cartridge type being used.
You can also select the Phono input by using the remote handset, (see p. 9) but MM/MC switching is ***not*** available on the remote.

CD
Selects the internal CD player. Please refer to p.10 for advice and player functions.

TUNER
Selects the internal tuner. Please refer to p.14 for advice and tuner functions.

AUX 1
To use the AUX1 input, connect your external source to the AUX1 input (see p.8). Pressing the AUX1 button selects the corresponding input. On AUX1 you have the option of analogue line level,

or digital optical/coax inputs.

The unit switches automatically to digital inputs and selects the correct one *when a digital signal is present*.

For sources with digital outputs, we recommend you use the KW250S digital inputs to take advantage of the up-sampling technology.

AUX 2
To use the AUX2 input, connect your external source to the AUX2 input (see p.8).
Pressing the AUX2 button selects the corresponding input. On AUX 2, you have the option of analogue line level (rear phono plugs or front 3.5mm jack PDI input),

or digital coax input.

The unit switches automatically to digital input for AUX2 when a digital signal is present.
For sources with digital outputs, we recommend you use the KW250S digital inputs to take advantage of the up-sampling technology.
The **AUX 2/PDI** input is also available at the front of the unit in the form of a 3½ mm jack PDI (Portable Device Input) socket to enable personal/portable devices such as MP3 players and minidisk walkman to be played thorough the unit.
TIP: For best listening experience using your portable

device, we recommend you set its outputs for "line level" use, as opposed to "headphones", if the option is available. Please refer to your portable device's manual, for more details

Note: Please note the sockets PDI at the front and AUX2/PDI at the back are electrically connected together:

If the front PDI socket is used, please ensure you disconnect any devices and wires connected to the rear AUX2/PDI connectors.

If the rear AUX2/PDI connectors are used, please ensure you disconnect any devices and wires connected to the front PDI socket

Failure to do so could result in equipment failure.

RECORDING

To record, to any format of your choice, simply select the required source with the input selector button on the front panel or remote control. This source will now be routed to the KW250S **TAPE OUT** for recording by tape deck, cd recorder DAT, minidisk, or computer soundcard input. You will also be able to hear the selected source through the loudspeakers.

Note - adjustment of the volume control has no effect on the recording level.

AMPLIFIER PROBLEMS?

Basic problem-solving with an amplifier is similar to troubleshooting other electrical or electronic equipment. Always check the most obvious possible causes first, such as the following examples:

Problem	Probable Cause	Remedy
No power when **POWER** button is pressed	Mains power plug is not fully inserted into rear socket	Plug in securely
No sound	Mute function is still active Wrong connections between input sources and the unit Speakers not connected, or incorrectly wired Devices connected to both AUX2 rear connector and PDI front panel input simultaneously	Press the **MUTE** button on the remote control to cancel Check audio input lead connections Check speaker cables Remove one of the devices
Sound is not precise, lacking in bass and stereo image	Speakers are connected out of phase, i.e., connections to one speaker (+ and -) are reversed	Ensure speakers are connected correctly
Hum	Audio connector plug not fully pushed in	Insert plug securely
Remote control does not work	Amplifier's **POWER** switch is set to off One or more batteries fitted the wrong way round Batteries are flat Remote control is not pointed directly towards the front panel of the amplifier	Set switch to on Insert batteries correctly Change batteries for a new set Ensure there is no obstruction between the remote control and amplifier front
Remote control range has greatly reduced	Batteries are running out	Change batteries for a new set.

If none of these actions affect a cure, please contact your dealer, or an authorised Musical Fidelity service agent. Remember; never open the case of the KW250S yourself, as this will invalidate the guarantee.

CD:

Disc mechanism	Philips
Total correlated jitter	< 135 pS

DAC:

DAC circuits	24 bit Delta-Sigma (Bit stream) dual differential 8x over sampling
Up sampling	192 kHz
Total correlated jitter	< 135 pS
Linearity	< 0.1dB down to -96dB
Output digital 0dB level	2.15VRMS at 1 kHz nominal
Analogue output impedance	47 Ohms
Frequency response	10Hz to 20 kHz -0.2dB max
Channel separation	> 105dB 20Hz to 20 kHz
Signal / noise ratio	> 113dB "A" weighted
Total harmonic distortion	< 0.003% 10Hz to 20 kHz

TUNER:

DAB Specifications

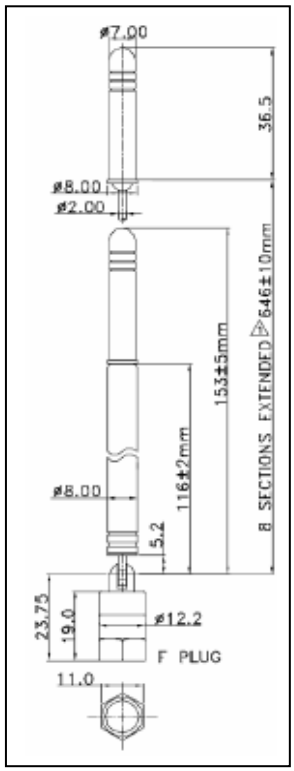
Supported DAB modes:	I, II, III, and IV VHF 174 240 MHz RF frequency range L-Band (standard and Canada) 1452 1492 MHz
VHF sensitivity	-96 -97 dBm (Measured to EN50248)
L-Band sensitivity	-95 -96.5 dBm (Measured to EN50248)
L-band after error correction	-15 dBm Maximum Input Signal for Pseudo channel BER with real value 0.02
Band III after error correction	0 dBm
Adjacent Channel Selectivity	32 33 dBm (Measured to EN50248)
Far-off selectivity	48 dBm (Measured to EN5024845)
Acquisition sensitivity	101 dBm
Input Impedance	50Ω F type connector (to VHF/L-Band diplexer)

FM Specifications

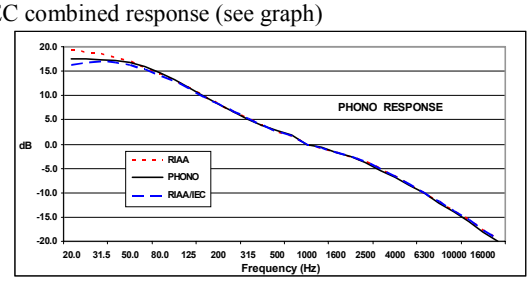
RF Frequency Range	87.5-108 MHz
RF Sensitivity (S+N)/N=26dB, 90MHz@22.5KHz	5 µV Dev. F.mod=1 KHz
RF Limiting Sensitivity	0.5 µV
(S+N)/N Ultimate s/n ratio	63 dB (90MHz@200mV/22.5KHz Dev. Fmod=1 KHz)
THD	0.5% (90MHz@200mV/75KHz Dev. Fmod=1 KHz)
Stereo Channel Separation	30 dB
RDS data	CENELEC EN50067 compliant

WHIP AERIAL:

Operating Frequency	FM Band 88-108MHz Band III 174-240MHz L-Band 1452-1492MHz
Gain FM & Band III	2dBi
L-Band	5dBi
Impedance	75Ω
S.W.R.	<2.0:1 at res. freq.
Polarization	Vertical
Connector	F-type
Operating temperature	-20 to +65°C
Storage temperature	-30 to +75°C
Length	Sleeve 36mm Retracted 153±10mm Extended 646±10mm
Mechanical Fixing	180° swivel joint on plug with locking nut



Output:	Power	250 Watts per channel into 8 Ohms (24dBW), 400 Watts per channel into 4 Ohms
	Voltage, RMS	45 Volts 20Hz to 20 kHz
	Voltage, Peak-to-peak	127.3 Volts
	Current peak-to-peak	75 Amps
	Damping factor	140
	Output devices per channel	4
	Pre-out impedance	50 Ohms
Line inputs:		
	THD + noise, 20Hz to 20 kHz	< 0.01%
	Signal / noise ratio	> 100dB 'A'-weighted
	Input sensitivity for 250 Watts	330mV
	Input impedance	220k Ohms
	Overload margin	26dB
	Channel separation	> 70dB typical
	Frequency response	20Hz to 20 kHz, +0, -0.2dB
Phono input:	RIAA/IEC combined response (see graph)	



	Signal / noise ratio	> 96dB 'A'-weighted
	Input sensitivity	2.5mV (moving magnet)
	Input impedance	47k Ohms
	Overload margin	24dB
Connections:		
	Aerial input	1 F-type (female) with securing thread, DAB/FM
	Digital inputs	1 optical (TOSLINK) 2 S/PDIF (RCA connector),
	Digital outputs	1 optical (Toslink), 44.1/48 kHz 1 S/PDIF (RCA connector), 48 kHz
	Line level inputs:	2 pairs line level RCA connectors, 1 front panel 3.5mm jack socket (sharing AUX2 input) 1 pair phono (MM/MC) RCA connectors,
	Line level outputs:	1 pair RCA [preamp] controlled by the volume, 1 pair RCA [tape record] fixed line level output.
	Speaker outputs:	1 pair 4mm banana plug/binding posts per channel.
	Power requirement:	100 / 115 / 230Volts AC 50 / 60Hz (factory pre-set), 700 Watts maximum into 8 Ohms, 80 Watts idle
Weight:	29.5 kg, 65 lbs	unit only, unboxed
	37.0 kg, 81.5 lbs	in shipping carton
Dimensions:	485 mm, 19.1 inches wide 170 mm, 6.7 inches high including feet 470 mm, 18. 5 inches deep including terminals	
Standard accessories:		Telescopic tri-band aerial with F-plug connector, IEC type mains lead (16-Amp type), Remote control (A5, universal type), 2 batteries size LR03 or AAA, manganese alkaline type

CE

Musical Fidelity reserves the right to make improvements which may result in specification or feature changes without notice.

RELEASE	DATE	CHANGES
Issue 1	1st June 2006	[1st release]
Issue 2	19th June 2006	Presentation updated.
Issue 3	12th July 2006	Item disposal page and CDDA note added